

# Passenger Terminal EXPO 2010

23. 24. 25 MARCH 2010  
BRUSSELS, BELGIUM

THE 16TH INTERNATIONAL CONFERENCE AND EXHIBITION FOR PASSENGER TERMINAL  
DESIGN, MANAGEMENT, SECURITY AND TECHNOLOGY

## AIRPORT ENVIRONMENT & SUSTAINABILITY



[www.passengerterminal-expo.com](http://www.passengerterminal-expo.com)

WEDNESDAY 24 MARCH 2010

**AIRPORT ENVIRONMENT & SUSTAINABILITY**

**Welcome to the session and introduction –  
Conference Chairs**

Sustainable terminal master planning has to consider environmental issues and cost effectiveness over the lifetime of the terminal. Airport operators must adapt to the evolving energy and climate change requirements with efficiency and sustainability. Speakers in today's session will share their experiences of current good practice in airport environmental strategies, and explain the opportunities that modern environmental management presents to airport development and operation. Real-life case studies from around the world will include examples of how to develop a long-term sustainability map; how to align sustainability goals for multiple elements over short-, mid- and long-term planning horizons; ways to measure and report progress towards a sustainable enterprise; ways to save fuel by operating aircraft more efficiently on the airside; how to design and operate an environmentally friendly energy system. There is no doubt that airports can become forerunners in energy efficiency and environmental protection – today's presentations will tell you how.

09.00-09.10

**CHAIR: Dave Tomber, Planning Program Manager, Seattle-Tacoma International Airport, USA**

**CHAIR: Steve Wareham, Director of MSP Operations, Metropolitan Airports Commission, USA**

09.10-09.40

**Rosemarie Andolino, Commissioner, Chicago Department of Aviation, USA**

**Chicago Department of Aviation's Sustainable Airport Manual**

Commissioner Rosemarie S. Andolino will provide an overview of O'Hare and Midway International Airports, as well as updates on the Hare Modernization Program and the latest efforts to develop sustainability guidance for airports around the world in accordance with the department's Sustainable Airports Manual (SAM).

The Chicago Department of Aviation continues to incorporate and expand sustainable initiatives for airport planning, operations and maintenance,

concessions and tenants in accordance with the CDA Sustainable Airport Manual (SAM), released in August 2009. To view case studies, lessons learned and new technologies, and for more information on the new Sustainable Airports Manual (SAM), please visit [www.airportgoinggreen.org](http://www.airportgoinggreen.org).

09.40-10.10

**Peter Marx, Vice President Environmental Management, Fraport AG, Germany**

**The sustainability map of an airport**

Predicting demand for air transport is a hazardous business in today's economic climate. Yet this is one of the most crucial factors in determining the overall sustainability profile of an airport. How does an airport develop a long-term sustainability map given the predicted growth of aviation? The challenge of future development in European aviation demands readiness and preparedness of the infrastructure today. The presentation will discuss management and the business philosophy of an airport operator.

10.10-10.40

**Dave Tomber, Planning Program Manager, Seattle-Tacoma International Airport, USA**

**Sustainable master planning for airport terminals: an integrated approach**

Economics, the environment and flexibility to cost-effectively provide capacity in a rapidly changing world are more important than ever to airport terminal development. Airport terminal planning and design has traditionally focused on capacity, initial cost and aesthetics. Although these elements are important, a new integrated approach to sustainable terminal master planning should also consider environmental issues and cost effectiveness over the terminal lifecycle. Aligning sustainability goals for multiple elements over short-, mid- and long-term planning horizons provides a framework for incremental development that is financially feasible for airports and their airline partners, and adaptable to evolving regulations and technology advancements.

The audience will learn about an integrated approach to sustainability master planning for airport terminals. Despite recent economic shocks, long-term forecasts project continued growth in air travel demand. Additional capacity will be needed, although greater emphasis will be on process improvement

and incremental development due to airport and airline business models. Lifecycle costs for operation, maintenance and utilities are several times the initial cost of construction for an airport terminal. In the United States regulatory change will have a profound impact on airport operators, and they need to adapt to the evolving energy and climate change environment with efficiency and sustainability.

10.40-11.00

**REFRESHMENT BREAK**

11.00-11.30

**Emanuel Fleuti, Head of Environment, Flughafen Zürich AG, Switzerland**

**Environmental opportunities in airport development and operation**

The presentation will outline the current regulatory and public framework (air quality, global emissions, energy) and will then address approaches in terms of management-specific projects and partner cooperation, and will deliver specific results from such programmes.

The audience will gain an insight into current good practice in airport environmental strategies, and learn the opportunities that modern environmental management presents to airport development and operation.

11.30-12.00

**Randy McGill, Manager Environment, Greater Toronto Airports Authority, Canada**

**Sustainability and the relationship between an airport and its community: Toronto International Airport**

The presentation will look at defining sustainability within the Toronto International context. It will discuss the Pearson Partners in Project Green – eco-industrial zone, and explain how to measure and report your progress towards a sustainable enterprise, utilising the new global reporting initiative airport supplement currently under development. The audience will get the Toronto International Airport story/narrative/case study on why and how we went green and became the first airport in NA to have our environmental management system ISO 14001 registered. You will also learn how and why we adopted the concept of sustainable development, adopted the global reporting initiative CSR and are

now working with the communities on sustainable development through the implementation of an eco-industrial strategy.

12.00-12.30

**Panagiotis Karamanos, Manager Environmental Services, Athens International Airport, Greece**

**Airports and climate change: best practices and initiatives**

This presentation focuses on the efforts made by airports during the last few years to address the challenge of climate change. Special reference is made to the development and effectiveness of ACI-Europe's (Airport Council International) Airport Carbon Accreditation Scheme (ACAS), as well as independent airport projects.

The audience will learn about airport best practices to address climate change; how ACI-Europe's ACAS programme developed; why ACAS gained acceptability from all European airports; the effectiveness of ACAS; next steps for airports.

12.30-13.00

**Christina Sares, Environmental Advisor, LfV, Stockholm-Arlanda Airport, Sweden**

**Achieving climate neutrality at Stockholm-Arlanda Airport**

For Stockholm-Arlanda Airport, the climate change issue has been a high priority for many years. During 2009 the airport was accredited the highest level in a European programme that assesses airports' efforts to manage and reduce their CO2 emissions. In four years, Stockholm-Arlanda has more than halved the CO2 emissions from its own operations. Stockholm-Arlanda's goal is to cut its own CO2 emissions towards zero 2012. There are also goals for other operations at the airport such as decreasing the environmental impact of road transport to and from the airport and to work with green approaches. Stockholm-Arlanda Airport is already considered climate neutral in its own operations. The presentation will give an overview of the different initiatives taken at Stockholm-Arlanda Airport to reduce CO2 emissions from airport activities as well as other actors such as road transport and air traffic.

13.00-14.00

**LUNCH in the delegate dining area of the exhibition hall**

14.00-15.00

### **PANEL: How do airports achieve environmentally sustainable development?**

- What steps can be taken towards achieving carbon neutral airports?
- What are the goals that should be set for all airports to achieve and by when?
- The impact of changing legislation on the price of energy and how terminal design will evolve (more aggressive design targets over short-, mid-, and long-range planning horizons)
- Aligning sustainability with traditional airport planning and development processes
- Balancing multiple bottom line strategies (people, profit, planet).
- What are the best practices for stakeholder engagement in environmental initiatives?

**Rosemarie Andolino, Peter Marx, Emanuel Fleuti, Randy McGill, Panagiotis Karamanos, Christina Sares**

15.15-15.30

### **REFRESHMENT BREAK**

15.30-15.55

**Stefan Keh, CEO Infrastructure Logistics, Siemens, Germany**

### **The efficient and green airport: how to get there?**

Today's airports are facing various challenges due to climate protection requirements and increasing energy costs. Demonstrating the need for a holistic view on strategy, there is a way in which airports could become forerunners in energy efficiency and environmental protection.

The audience will be given an insight into an approach and methodology to develop a green airport strategy focused on sustainability and energy efficiency. The presentation also focuses on the key areas and processes that have an impact on CO<sub>2</sub> emissions and on practical examples to improve the situation.

15.55-16.20

**Geir Vangsnes, Head of Department, Oslo Lufthavn AS, Norway**

### **OSL-Terminal 2: experiences with existing thermal energy supply**

Experiences with the design and operation of an environmentally friendly energy system with a ground-water-based heat pump as the primary

system for heating and cooling. The energy plant at Gardermoen is one of the first and largest geothermal energy plants in the Nordic countries that utilises a ground-water aquifer as an energy storage. The presentation will discuss the importance of cooperation with clients' expertise when designing energy supply systems.

16.20-16.45

**Erik Rigstad, Senior Engineer, Cowi AS, Norway**  
**OSL-Terminal 2: energy concept and integrated design**

The Central Building West and the North Wing will be designed to set an example in terms of energy use, energy supply and sustainability. Strategy for the integrated energy design is based on a holistic view of building structures and technical installations, and based on the Kyoto pyramid, where the first focus is to satisfy national regulatory requirements. Another focus is to minimise energy requirements. An emphasis is put on measures that are cost effective in terms of reductions in environmental impacts. The presentation will discuss design strategies, and provide an insight into thermal cooperation between building structure and technical equipment. There will also be an examination of environmental design: ambitions and effects.

16.45-17.10

**Zhixiong Thomas Pan, Engineer, Changi Airport Group (Singapore) Pte Ltd, Singapore**  
**Solar photovoltaic project at the budget terminal Singapore Changi Airport**

As climate change issues intensify and energy costs escalate due to rising fuel prices, airports have started to explore and implement solar photovoltaic (PV) technologies as an alternative source of clean and sustainable energy. As part of the continuing effort to mitigate climate change and make the airport more environmentally friendly, Changi Airport has installed a 250kwp solar PV system on the roof of the budget terminal (BT). The PV system, partially funded by the Singapore government, allows Changi Airport to reduce energy consumption by at least 281,000kwh per year. As part of its contribution to the research efforts of Singapore's clean energy industry, Changi Airport will supply energy data to local PV researchers. This presentation highlights the current performance of the PV system and some of the key challenges faced during project

implementation.

17.10-17.35

**Stuart Condie, Director, James Aviation Ltd, UK**

**Aviation's environmental footprint (the OMEGA story)**

Over 2007-9 the UK government funded £5m for knowledge transfer and R&D on aviation's environmental footprint. This was delivered by a unique academic partnership with industry stakeholders, called Omega. The presentation highlights some of the more interesting findings from Omega and the implications of these for aviation's future. There will be an overview of key R&D issues for aviation's impact on the environment, plus a discussion of what the unknowns are, how Omega addressed these and what the results were, and key areas where further work still has to be done.